STRICKEN HAMBURG.

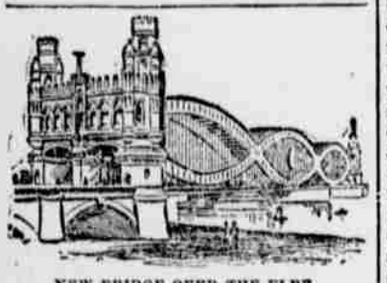
DESCRIPTION OF THE CHOLERA-INFECTED PORT.

One of the Four Great Seaports in the World — Fine Quays and Irregular Streets — The City's Attractions.

THE cities of Hamburg, Havre and Antwerp are the gateways of Europe which open outward for the thousands of emigrants to come to America. It is the purpose of this article, says the New York World, to give some idea of Hamburg. Commerce has made Hamburg great. Next to London and Liverpool it is the greatest commercial place of Europe, and with New York it is one of the four great seaports of the world. Its imports amount to more than a billion dollars annually. Nine thousand vessels visit it every year. From it are sent thousands upon thousands of emigrants to America.

Hamburg lies on the Lower Elbe. It is seventy miles from the North Sea and 171 miles from Berlin, on the Upper Elbe. At Hamburg the Elbe is broad and deep. The harbor is magnificent. There can be found more vessels than are seen in New York Harbor.

The harbor, until death placed its hand upon the people, presents always a busy and picturesque scene. The quays extend along the right bank of the Norder Elbe from Altona to the Billwarder-Neuendeich, a distance of more than three miles, and accommodate upward of four hundred sea-going vessels and as many barges and river craft. The west end of the quay, opposite St. Paul, is chiefly occupied by the English colliers and the steamers of the Hamburg American Company. Adjacent is the Neider-hafen, intended principally for the reception of sailing vessels during the season of floating ice, and connected with the Elbe with several outlets which are called Gatts. Further east are the Sandthor-hafen, 1100 yards long, and 100 to 140 yards wide, with the Sandthor quay and the Kaiser quay, and the Grasbrook hafen with the Dahann quay and the Hubener quay, both suited for vessels of heavy tonnage. The latter are used principally for the Atlantic liners.



NEW BRIDGE OVER THE ELBE.

Still further east are the Ober hafen and other harbors for river craft and finally on the other side of the Elbe, on the small Grassbrook are large Holz hafen, or wood harbors, for the storage of timber. Between the Brookthor hafen and the Ober hafen, to the south, is the large Venlo station of the Paris line. Near it are extensive warehouse and custom house premises. A little above the station is the handsome iron railway bridge whose design looks so strange to American eyes.

The Steinwarder and Kleine Grasbrook are little islands opposite the Neider-hafen. They are occupied by extensive wharves, the ship-building yards and the dry-docks of the Hamburg-American Company. They command a fine view of the Hamburg quays, which are said to be the equal of any in the world, which is saying much, for it was popularly believed that no quays could ever hope to equal those of Liverpool.

As it is this harbor which has made Hamburg great, it is a good thing to know something about it from the first. And it was along this part of the city that the cholera was first discovered and there it is now raging with such fury.

The water is deep in the Elbe and it is so large that the ocean steamers can come up into the city. All the vessels do come up except the big twin-screw steamers of the Hamburg line. One of the big twin-screws might make its way up to the city, but there would be no certainty when it would be able to get out again. So now the twin-screw steamers land at Cuxhaven, on the North Sea, which is three hours' ride by rail from Hamburg.

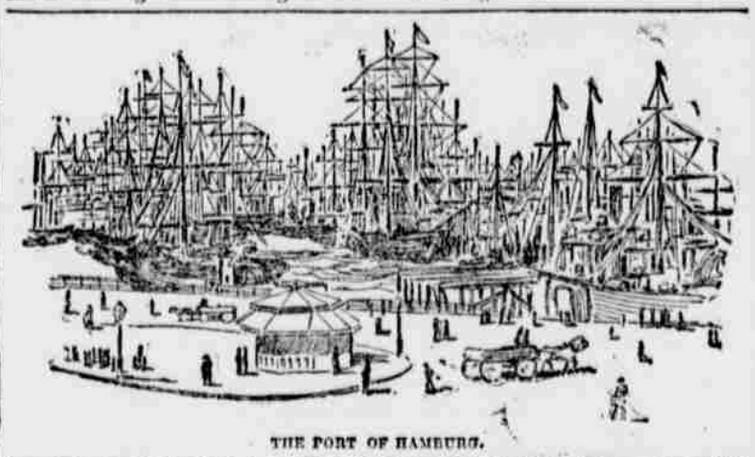
THE CITY OF HAMBURG.

There are two rivers about Hamburg. They are small, but they add much to the attraction of the city. They are the Alster and the Bille. The former flowing from the north, forms a large basin outside the town and a smaller one within it, called the Aussen-Alster and the Binnen-Alster respectively. It is about the Alsters, which would be called lakes or ponds in this country, that the fine hotels, the fine houses and the fine shops are found. They are beautifully located. It is the fashionable part of the city.

The little rivers, the Alster and the Bille, are discharged by locks into the canals, which are called fleetes. These canals make a network of the lower part of the city. They run off from the Elbe. There are many of them and on all merchandise is transported. There is no trucking in Hamburg to talk about. The cargoes of vessels and other merchandise is placed on large, flat bottomed boats, which are poled about the canals in a manner curious and strange to the visitor.

Down among these canals is St. Paul. St. Pauli is the Bowery of Hamburg. The concert hall and the beer garden flourish amid gay and furious fun with the hawker and Zakir. The city is the most tangled up place imaginable. The streets wander about in the most haphazard way and everywhere the visitor comes upon water. St. Pauli is called a suburb. A right-angle triangle, with the Elbe as the base and the apex beyond Altona will give an idea of the general shape of the town. But Altona is not a part of Hamburg, it is a suburb.

No one can tell where Hamburg begins and Altona leaves off any more than one can tell where Yorkville leaves off and Harlem begins. It is a big suburb.



THE PORT OF HAMBURG.

According to people who know all about these things, the city of Hamburg consists of Allstadt and Neustadt, formerly surrounded by fortifications, and St. Pauli, together with several adjacent villages. But Altona has been left out in the cold.

The greatest attraction of Hamburg is the Binen-Alster, which is usually called the Alster-Bassin by the people of Hamburg. It is a beautiful sheet of water of an irregular form and more than a mile in circumference. It is bounded on three sides with quays, planted with trees and flanked with palatial hotels and handsome private dwellings. These quays are called the Alte, the Neue Jungsernsteig and the Alsterdamm. The fourth side, towards the Aussen-Alster, is laid out in promenades connected by the Lombardsbruche. The water is covered with launches and rowboats on summer evenings, and the swans have an uncomfortable time amid the pleasure seekers.

The banks are the favorite promenade of the city. Adjoining the Alte Jungfersteig on the southeast are the Alster Arcades, where are found the fashionable shops. The ramparts near Lombarsbruche overlook the Binnen-Alster, which is three or four times as large as the other basin. The banks are studded with villas.

The houses of the rich people are modern and attractive. The houses of the poor have the appearance of great age and look rickety. The poorer quarters suggest great difficulty in maintaining good sanitary conditions.

Every person in America who has ever had anything to do with the royal Bengal tiger or the fierce Numidian lion knows that Hamburg is the world's great animal market. Every wild animal or bird or beast or reptile that is placed upon exhibition is bought through the dealers of Hamburg. It naturally follows that the zoological gardens of Hamburg are the finest to be found anywhere. They are over in the northwestern part of the city.

There is a sarcophagus in one of the cemeteries commemorating the death of 1138 citizens of Hamburg who, having been banished by Marshal Davoust, together with many thousands of their fellow-citizens, during the winter of 1813-14, fell victims to grief, starvation and disease.

The streets of Hamburg are well paved, and it strikes the visitor from New York as being a particularly cleanly city. In fact, the streets seem a most delightful contrast to Broadway. There is never any dust in the city. This is accounted for by the fact that it rains in Hamburg nearly all the time. The official records show that rain falls 350 days in the year. Sometimes it sprinkles for only a few minutes and then it pours for days and days. During the first week in August last four days passed without any rain falling, and it almost created a panic. No one could remember of such a thing happening before.

The city is so old that no one knows when it began to be. But it is certain that as early as 811 the big and strong Charlemagne founded a castle at Hamburg, to which he soon added a church, presided over by a bishop, whose business it was to propagate Christianity in those northern regions.

The Counts of Holstein, within whose jurisdiction Hamburg was situated, particularly Adolph III. and IV., became great benefactors of the town and secured for its privileges and immunities which formed the foundation of its subsequent independence.

Hamburg joined the Hanseatic League at an early period and played a prominent part in its contest with the Danish kings in the thirteenth and fourteenth centuries. The city was also honorably distinguished in the good work of sweeping the sea of pirates. Even in those early days it began to have importance as a commercial point. The discovery of America and the sea route to India had its effect upon Hamburg, but at that time it did not make much of a showing with England and Holland.

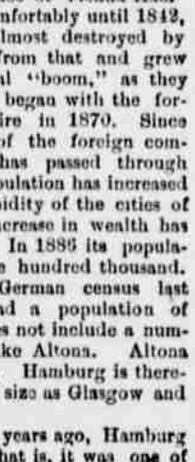
In 1529 the citizens adopted the Reformed faith and established a free political constitution. The Thirty Years war didn't affect it particularly. It was so strongly fortified that it wasn't considered wise to trouble it. These fortifications are now converted into promenades. Then the Council and the citizens began to have trouble with each other and Hamburg became stagnant. It was not until the end of that last century that she began to make any progress again It was then that direct communication, with America was established, and to this day that is the main-spring of her commercial importance.

In 1810 Hamburg was annexed to the French Empire. She rebelled in 1813, and then it was that Marshall Davoust wrecked vengeance upon those to whom the sarcophagus is erected in the cemetery. After the peace of Vienna Hamburg got along comfortably until 1842, when the city was almost destroyed by fire. It recovered from that and grew apace. But its real "boom," as they say in this country, began with the formation of the empire in 1870. Since that time the bulk of the foreign commerce of Germany has passed through Hamburg. Its population has increased almost with the rapidity of the cities of the West, and its increase in wealth has been even greater. In 1886 its population was about three hundred thousand. According to the German census last year, Hamburg had a population of 520,000. This does not include a number of its suburb, like Altona. Altona has 200,000 people. Hamburg is therefore about the same size as Glasgow and Liverpool.

Until four or five years ago, Hamburg was a free city. That is, it was one of the States of the German Federation, and included a small tract of contiguous territory. Bismarck made an effort to incorporate it into Prussia, and finally succeeded in overcoming the opposition of the people, who jealously guarded their freedom and independence.

One of the chief factors in Hamburg's development has been the Hamburg-American Steamship Company. It has built up a tremendous trade and an enormous emigrant traffic. Many railroads run into Hamburg from the interior, and bring thousands of emigrants. It has become the chief embarking point for emigrants from Russia and Poland. It was some of the Russia emigrants who are supposed to have brought the disease into Hamburg. Between thirty and forty thousand emigrants leave Hamburg for America every day.

Cucumber Grown in a Bottle.



A full-grown cucumber in a small-necked bottle is a curiosity easily obtained; you simply select a healthy-looking small cucumber, place it in the bottle which is laid by the side of the growing vine, and when grown so as to nearly fill the bottle cut the stem. Fill the bottle with alcohol, firmly cork and seal, and you have something to show to your friends for many years, as seen in the illustration. Two red peppers may also be fully grown in a bottle. In this case you have to tie the bottle to a stake driven close to the pepper plant, placing a bit of cloth over the mouth of the bottle to keep out as much rain as possible. It is best to remove nearly all the remaining peppers and cucumbers from the plant, that a well developed specimen may grow in the bottle.—American Agriculturist.

Bartholdi's studio in Paris is crowded with new works in various stages of completion. His latest production is a group for a monument that is to constitute the offering of a wealthy citizen of Strasburg to the Republic of Switzerland.

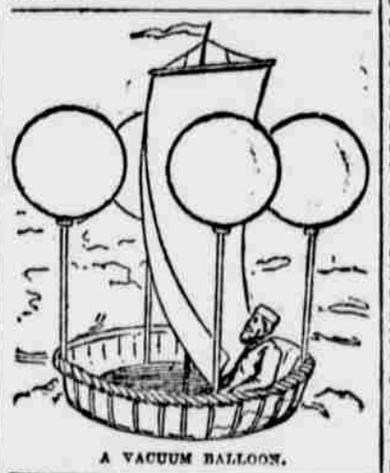
AIR SHIPS.

THE RISE AND PROGRESS OF AERIAL NAVIGATION.

Various Inventions for Sailing in the Clouds—The Vacuum Bellows—Other Forms of Navigable Balloons.

THE recent experiments with balloons intended for use in war, and the preparations of many inventors to exhibit their airships at the World's Fair, show that the myriad failures and many fatalities which have marked the history of aerial navigation have not discouraged ambitious men, who see a fortune or fame in the solution of this problem. It has been full of fascination, and its record teems with interesting adventure, says the New York Recorder.

Soon after the publication of Torricelli's discovery that air was weight, it occurred to another Italian—Francesco Lana—that it would be possible for a body to rise in air, provided it weighed less than the air it displaced. He accordingly proposed to make an aerial vessel to be raised by means of globes from which the air was exhausted. In his design the wicker-work car is attached to four large spheres of copper, and a sail is fixed in the center. We have no record of the apparatus having been constructed, and it is quite certain that it was not successful. Theoretically, there is no reason why a balloon should be constructed on the vacuum principle, though it is doubtful if even at the present day a vessel could be built sufficiently strong to withstand the pressure of the atmosphere and at the same time sufficiently light to rise. Nevertheless, a patent was granted last year to an inventor, who stated in his specification that a vacuum balloon is not an impossibility. He gives calculations which if there be no flaw in them, show that a vessel can be constructed weighing 185 tons and capable of raising fifty tons more than its own weight when three-quarters of the air is pumped out of it.



A VACUUM BALLOON.

As is well known, the first balloon ascent was that of M. Pilatre de Rozier, in Montgolfier's fire balloon, which took place on October 15, 1783. The air in the balloon was rarified by a fire beneath it, and the aeronaut stood in a gallery formed round the mouth. The ascent on this occasion was limited to a height of about eighty feet by ropes, but a month later, on November 21, the same gentleman ascended with a companion in a fire balloon and descended in safety some five miles from the place he started. Several ascents were afterwards made in fire balloons, but before long they were abandoned, owing to accidents having occurred through their becoming ignited.

Though the use of hydrogen gas as a means for raising balloons was proposed as early as 1767 by Dr. William Black of Edinburgh, no attempt was made to utilize it except for toy balloons until August 1783, when MM. Charles and Robert sent up a large balloon from Paris. The balloon rose to a height of 3000 feet, and fell fifteen miles away in the country, where it caused great consternation among the inhabitants, who imagined it to be of supernatural origin. On December 1st of the same year the makers of the balloon ascended in it from the Tuileries, and descended safely after a journey of about three miles.

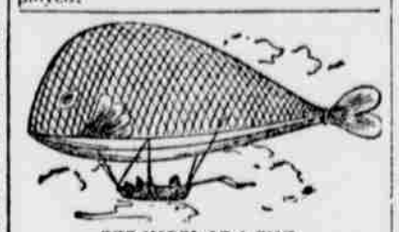
Before the end of the last century it was known that a gas could be obtained from coal which was lighter than air, and its use for aeronautical purposes was proposed as early as 1785 by Tiberius Cavallo. It was not, however, employed, except on a small scale, till much later, owing to the difficulty of making it in sufficient quantity. When coal gas came into use as an illuminant at the beginning of this century, it was available for aeronautical purposes, and was soon made use of. At the present day it is almost invariably used instead of hydrogen gas, though it is much heavier, and it is cheaper and is easier to procure in any quantity.

A REGULAR AIRSHIP.

It was obvious from the first that balloons would not be of any great practical use unless means could be devised for propelling and steering them, and inventors, therefore, soon turned their attention to the subject. In the illustration of an airship designed in 1784 by M. B——, of Paris, it will be noticed that the ship is fitted with a sail, which could have no effect on a vessel floating in the air.

Many attempts have been made to use wingless oars or paddles for rowing balloons through the air. The Dolphin was to have been worked in this way. The propellers were set like fins near the head of the fish-shaped balloon, and were to be worked by levers extending down to the car. The construction of the Dolphin was commenced in 1817 by a Mr. S. Paully, the money required, which amounted to $50,000, being found by Mr. Dars Egg, a gunmaker, well known at the time. The envelope was made of gold-beater's skin, and the fins and rudder of silk and whalebone. The completion of the apparatus was protracted by dissensions between the proprietors, and eventually both died without the machine being finished. Some considerable progress must, however, have been made, as tickets entitling the holders to view the machine were printed; on them was a picture, of which the illustration is a copy.

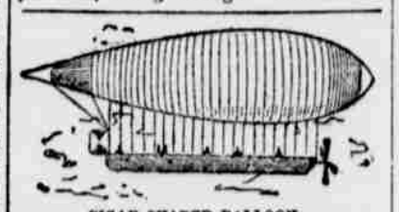
Some inventors have recently proposed to use wings or paddles, worked mechanically. In the specification of a patent applied for last year, for instance, is described a canoe-shaped balloon with self-feathering paddles, driven by steam or electricity. Though it is quite possible that wings or paddles might successfully be used, the machinery for operating them is necessarily more complicated than that required for turning a screw propeller, and, therefore, the latter is almost invariably now employed.



THE MODEL OF A FISH.

The first successfully propelled balloon seems to have been that of Rufus Porter, an American, who, in 1833, constructed a model some twenty feet long, which was worked by a small steam engine. The apparatus was exhibited in New York and worked successfully, but no attempt seems to have been made by this inventor to construct a balloon large enough to carry a human being. Another model was made by a Frenchman, M. Jullien, in 1850, which worked successfully, and was exhibited in Paris at the Hippodrome. Two years later a balloon was made by Giffard, which could be propelled through the air on a calm day, and could be steered satisfactorily in a strong wind, though it could not be propelled directly against it. During the siege of Paris ordinary balloons were much used for carrying letters, etc., and before the siege was raised M. Dupuy de Lorne was intrusted by the Government with the construction of a navigable one. The war terminated, however, before it was completed. It was afterwards finished, and tried with eight men in it working the screw propellor, the experiment proved fairly successful, though the strength of the men was insufficient to cause it to travel at any great pace. Another successful French balloon was that invented by the brothers Tissandier. The balloon was driven by an electric motor of one and one half horse power worked by a battery. The balloon steered well, and a speed of nine or ten miles an hour was obtained.

In 1884 a balloon named "La France" was built by Captain Renaud and M. Krebs, again Frenchmen. Out of seven trials five were completely successful, the balloon, after covering a considerable distance at a speed of ten to fifteen miles per hour, being brought back to its



CIGAR-SHAPED BALLOON.

starting point. On one of the remaining trials something went wrong with the electrical apparatus, and on another occasion the wind was excessively high, and the balloon could not make headway against it.

In 1890 a navigable balloon was successfully constructed by Professor Carl Meyer. The balloon itself was somewhat the shape of a cocked hat, why, it is hard to say, as this shape does not appear to have any advantages over the cigar shape, usually adopted for navigable balloons. The propeller was driven from cranks worked by the feet of the operator like those of a bicycle. The speed attained was about ten miles an hour.

Though the problem of navigating balloons has not as yet been completely solved, great advances have been made in the last few years, and it is certain that in the future navigable balloons will be employed in war, even if no other use is found for them.

The Most Ancient Temple.

In the temple of Mecca there is a square stone edifice which, by tradition, is said to have been built by Abraham and his son Ismael. It is this part of the temple, known as the Caaba, which is principally reverenced by the Mohammedans, and to which they always direct their prayers.—Philadelphia Record.

According to a very good authority the middle C is declared to be the note most frequently used in vocalism, as it seems to be the note which best avoids the extremes and is most within the vocal compass.

An Almost Unknown Animal.

Speaking of the arrival at the Zoological Park in Washington of a herd of eight llamas, the Star of that city says:

The llama is an almost unknown animal in this country, although found more or less numerously in the high altitudes of South America. The animal is the representative of the camel family on the western hemisphere. In South America they are a very valuable animal, being used for carrying burdens over the high mountains, while their wool is

A LLAMA.

used for clothing and their flesh for food. Without the camels' hump, they, although much smaller, resemble the camel around the head and mouth. When in a wild stage they live high up on the mountains and descend for food. One of their peculiarities, and a disagreeable one, too, is their power to eject, when irritated, a most horrible mixture from their mouths ten or twelve feet, blinding an opponent.

The animals were secured at an altitude of 9000 feet on the sterile plains of Riobamba. Living almost in an arctic climate the llama is especially susceptible to heat, and it was thought best to bring them down to the sea by easy stages. One month was therefore spent in going from Riobamba to the coast, which admitted of several stops to acclimate the animals to the great heat. The herd which left Riobamba consisted of ten animals, all of which reached the coast in apparently good condition. The herd was driven by two Indians, and on reaching Guayaquil, on the coast, were corailed in the gardens of the hippodrome, where they remained a week.

Largest Steer in the World.

William M. Singerly, President of the Record Publishing Company, of Philadelphia, will take his big steer, the largest in the world, to the Columbian

Exposition. The steer was sired by a pure bred Holstein, and its dam is a pure bred Durham cow. The animal is six years old and weighs 3800 pounds. Its height is five feet ten inches, its girth over loin ten feet ten inches, and its length from root of ear to tail nine feet ten inches. Mr. Singerly will exhibit his steer in the live stock department of the Exposition.

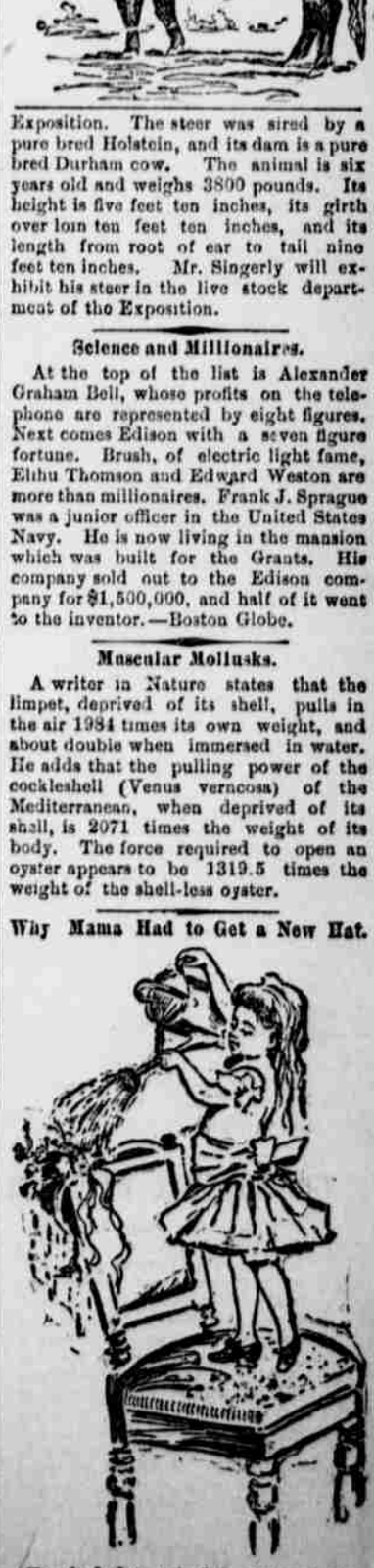
Science and Millionaires.

At the top of the list is Alexander Graham Bell, whose profits on the telephone are represented by eight figures. Next comes Edison with a seven figure fortune. Brush, of electric light fame, Elihu Thomson and Edward Weston are more than millionaires. Frank J. Sprague was a junior officer in the United States Navy. He is now living in the mansion which was built for the Grants. His company sold out to the Edison company for $1,500,000, and half of it went to the inventor.—Boston Globe.

Muscular Mollusks.

A writer in Nature states that the limpet, deprived of its shell, pulls in the air 1984 times its own weight, and about double when immersed in water. He adds that the pulling power of the cockleshell (Venus verncosa) of the Mediterranean, when deprived of its shell, is 2071 times the weight of its body. The force required to open an oyster appears to be 1319.5 times the weight of the shell-less oyster.

Why Mama Had to Get a New Hat.



Too bad dat nobody's watered dese petty t'owers! Dese I do it mine owase'f.